bematech

# SB9015F All-in-one Touch POS Terminal

## USER MANUAL

# Table of Contents


**1 Introduction ..... 2**

1.1 Safety Information ..... 2
1.2 Electromagnetic compatibility statement ..... 3

**2 Overview ..... 4**

2.1 Appearances ..... 4
2.2 Rear panel I/O connectors ..... 5
2.3 Rear View ..... 6
2.4 Control Panel ..... 7

**3 Hardware Installation ..... 8**

3.1 Cable Routing ..... 8
3.2 Installing MSR ..... 8
3.3 Installing Customer Display ..... 9
3.4 Installing Second LCD ..... 9
3.5 Replacing System Core ..... 10
3.6 Replacing Hard Disk Drive ..... 10

**4 Setup and Driver Installation ..... 11**

4.1 Cash Drawer Port ..... 11
4.2 Jumper settings ..... 11
4.3 Motherboard BIOS settings ..... 13
4.4 Touch screen driver installation: ..... 16

**5 Troubleshooting ..... 24**

**6 Specifications ..... 27**

# 1 Introduction

Thank you for purchasing the SB9015F all-in-one touch POS terminal, Bematech is committed to continuously improve product quality and provide better after-sales service. In order to take full advantage of our devices, we strongly recommend that you take the time to read this manual before diving into software solution.

*Note:* *Information in this manual may change without prior notice.*

## 1.1 Safety Information

- Before plug in the product, please make sure the power you provide meets the power requirements (such as voltage, frequency); Make sure the ground terminal of the power outlet is working properly.
- To avoid electric shocks, disconnect the power cord from the electrical outlet before relocating the system.
- Lightning may damage this product. During lightning storms, unplug the network cable, power cable and any other connections.
- Turn off power before connecting any devices (except USB devices) to the terminal.
- Do not attempt to open the chassis. You may be hurt by electric shock. For service, call your place of purchase.
- Do not spill liquid on the terminal. Do not place any objects into the ventilation holes of this product. It may cause short-circuit of the internal components and cause a fire or electric shock.
- After the terminal is stored below temperature of 10 ° C, please place it in room temperature (10-35 ° C) in the original packing for at least two hours to allow the terminal to restore to room temperature before operation. This is to avoid condensation that might cause electrical damage.
- Keep the terminal clean, dry, and away from dust, moisture and direct sunlight.

- Do not use harsh chemicals or strong cleaning solvents to clean the monitor screen. Wipe it clean with a soft terry cloth applied with a mild solution
- Do not share the same power outlet with high-power electrical appliances; keep distance from high level magnetic interference.
- Do not the use sharp pointed objects to work with the touch screen to avoid damage to the screen.

**When the following occurs:**

- Liquid gets inside the POS terminal;
- Accidental physical damage;
- The power cord or plug is damaged;
- POS terminal produces a burning smell;

Immediately disconnect the power supply, unplug the power cord, and contact a qualified service technician.

## 1.2 Electromagnetic compatibility statement

**FCC NOTICE**

This device complies with Part 15 of FCC Rules. Operations are subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**EUROPEAN COMMUNITY (CE) MARK OF CONFORMITY**

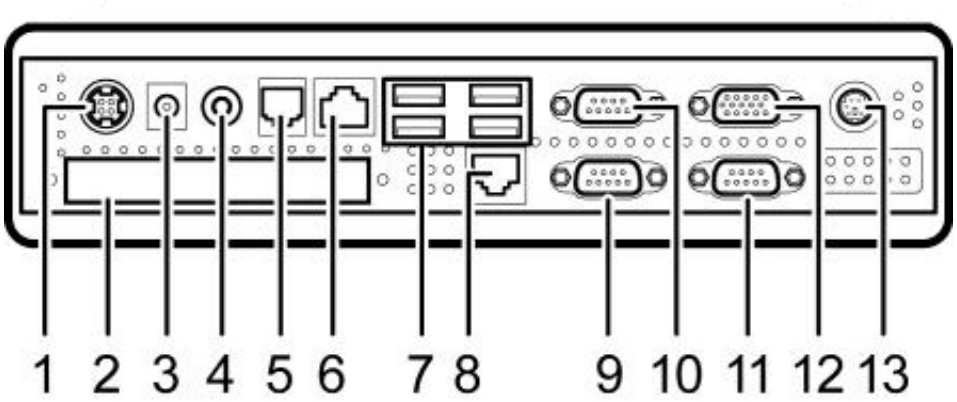
This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Logic Controls cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product. This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

# 2 Overview

## 2.1 Appearances

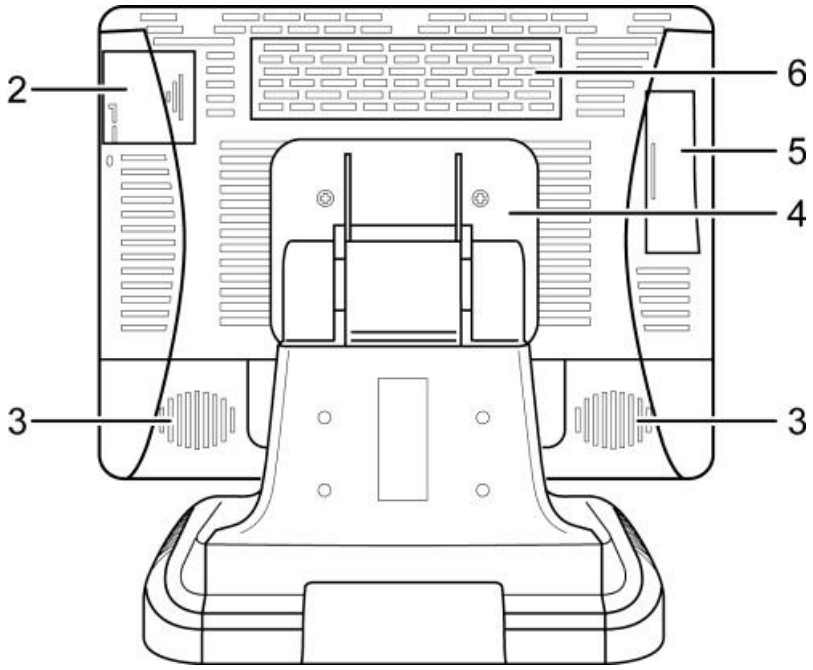
## 2.2 Rear panel I/O connectors

At the rear panel of the SB9015F is a row of external I/O device connectors detailed as follows:




| | |
|---|---|
| 1 | DC in |
| 2 | HDD slot |
| 3 | DC out (for 2nd LCD) |
| 4 | Line out |
| 5 | Cash drawer port |
| 6 | COM5 |
| 7 | USB port x 4 |
| 8 | LAN port |
| 9 | COM3 |
| 10 | COM4 |
| 11 | COM1 |
| 12 | VGA port |
| 13 | PS/2 keyboard port |

## 2.3 Rear View




1 VESA holes

2 MSR module compartment

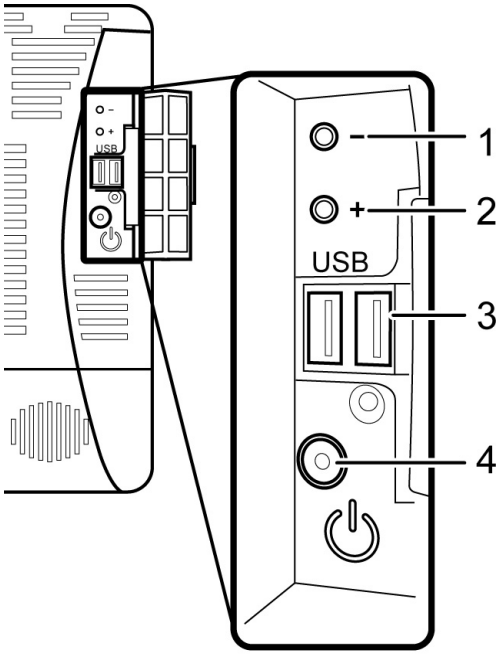
3 Speakers

4 VESA routing plate

5 Control panel

6 Display module compartment (for Customer display or 2nd LCD)

## 2.4 Control Panel

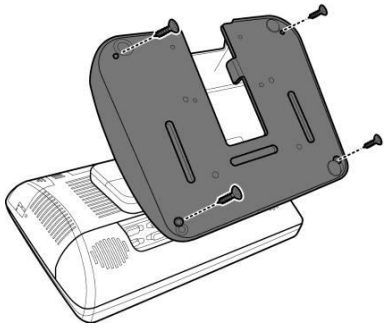


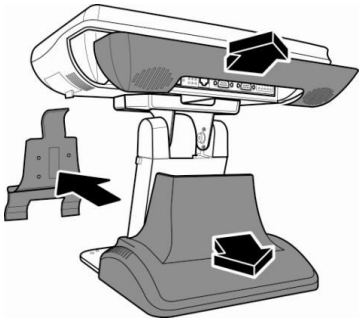

| | | |
|---|---|---|
| 1 | Brightness – | Press the “Brightness –” button to decrease brightness. The setting will be saved 6 seconds after releasing the button. |
| 2 | Brightness + | Press the “Brightness +” button to increase brightness. The setting will be saved 6 seconds after releasing the button. |
| 3 | USB ports | Connect external peripherals such as a memory drive. |
| 4 | Power Button | Press to turn the POS terminal on or off. The LED lights up blue when the power is on. |

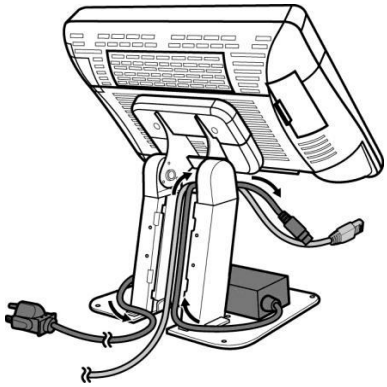
*Note: Press the “Brightness –” and “Brightness +” buttons at the same time to restore brightness to the factory default setting.*

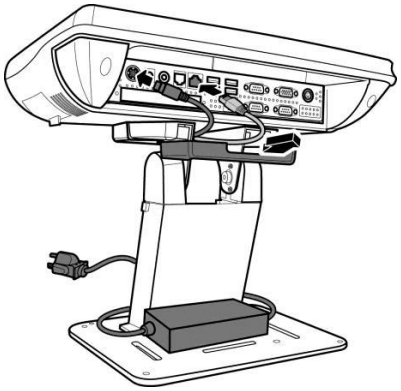
# 3 Hardware Installation

## 3.1 Cable Routing

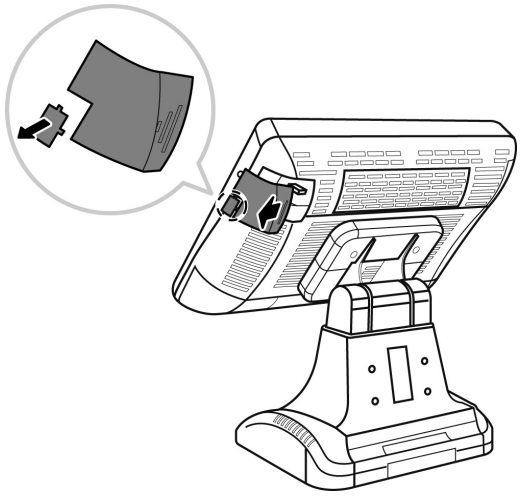


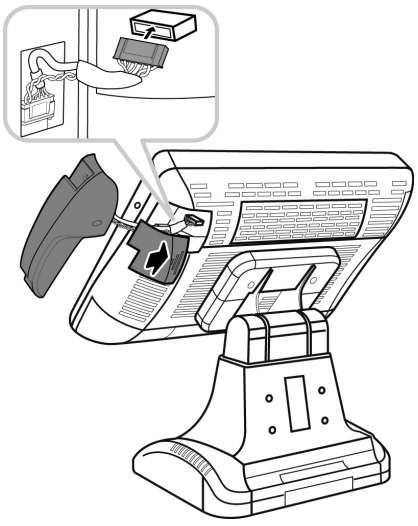




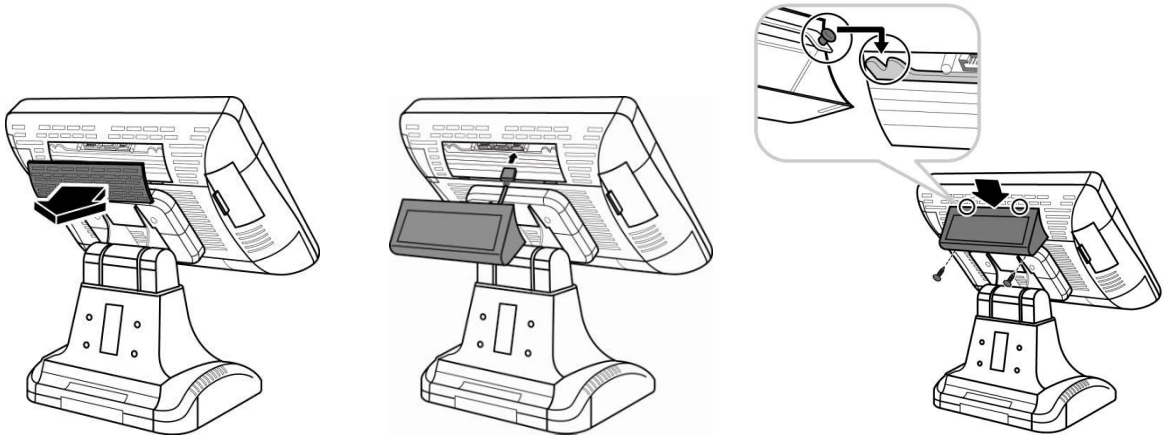


## 3.2 Installing MSR

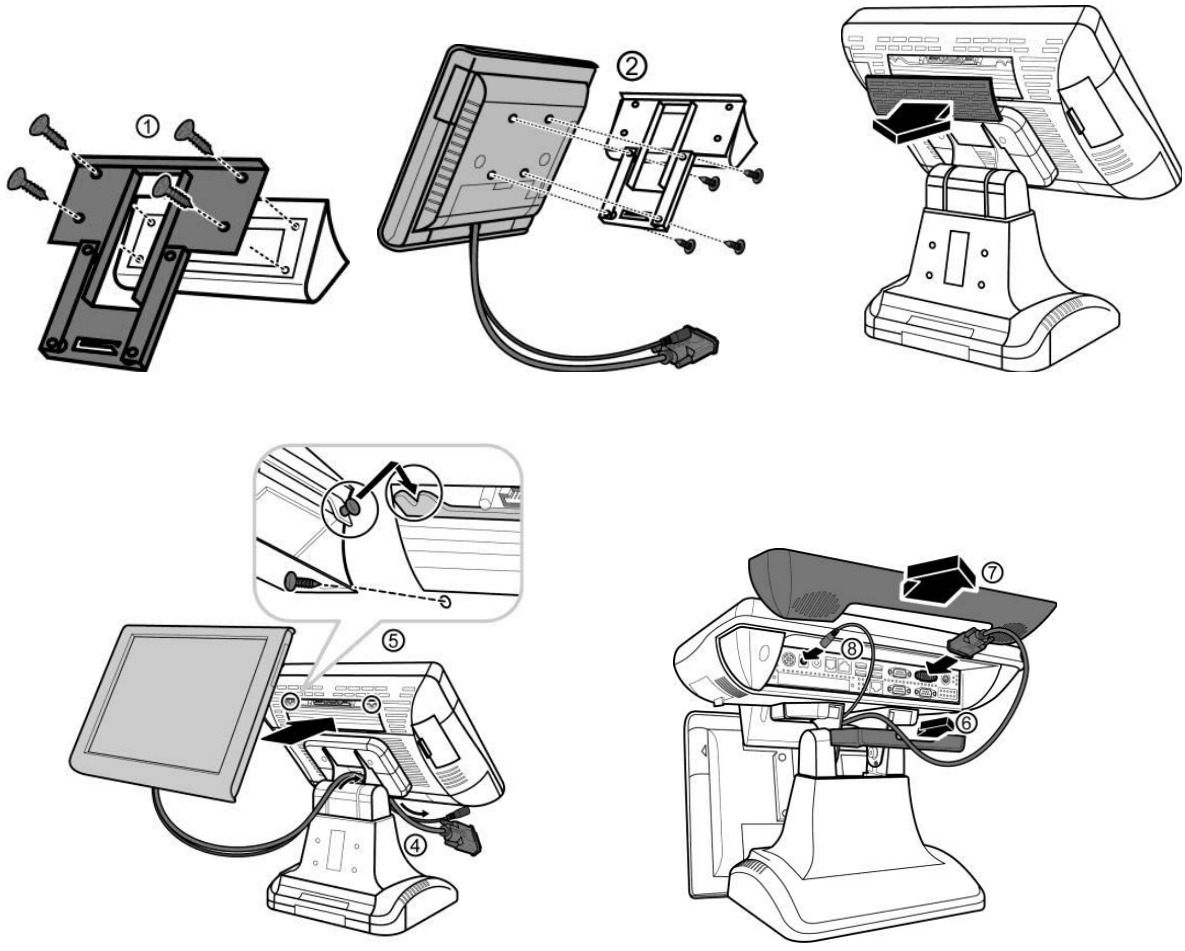




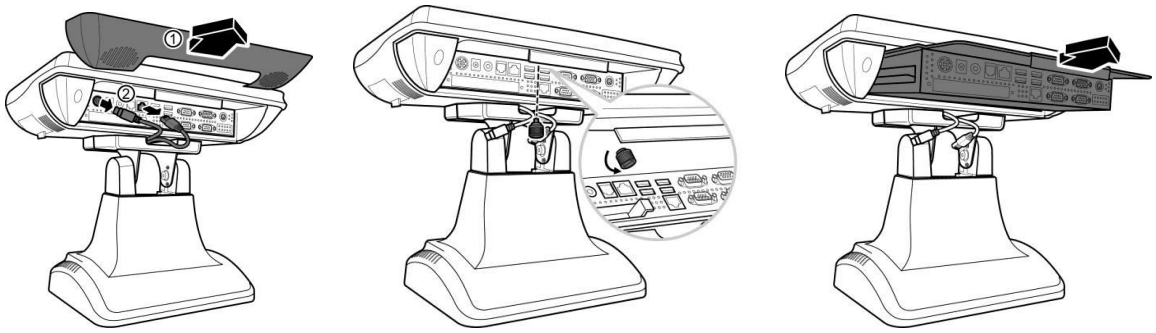
## 3.3 Installing Customer Display



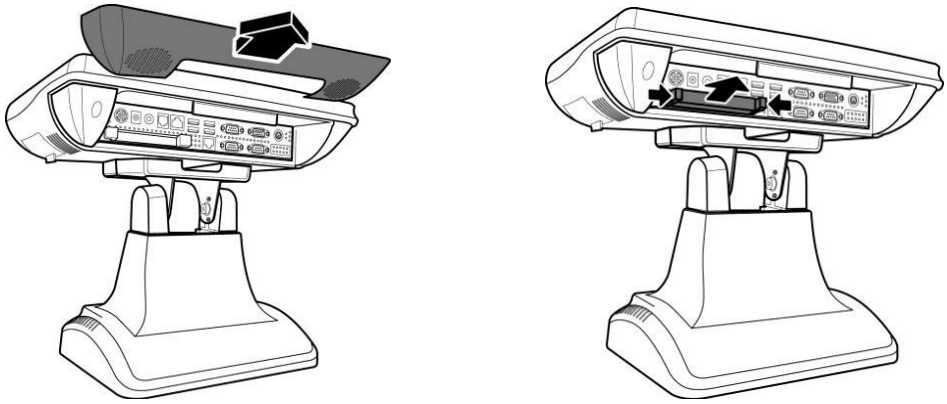
## 3.4 Installing Second LCD



## 3.5 Replacing System Core



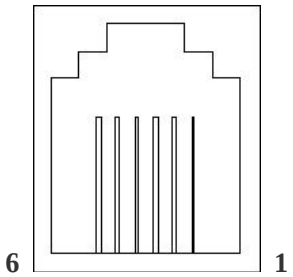

## 3.6 Replacing Hard Disk Drive



# 4 Setup and Driver Installation

## 4.1 Cash Drawer Port

Pin-out




| Pin | Description |
|---|---|
| 1 | Ground |
| 2 | Drive output |
| 3 | Sense input |
| 4 | +24V/+12V |
| 5 | None |
| 6 | Ground |

Operation

| | |
|---|---|
| COM port | COM6 |
| Baud rate | 1200 |
| I/O address | 288h |
| Open command | 01h |
| Respond command | 02h |

## 4.2 Jumper settings

| JP2 - Cash drawer voltage setting | | |
|---|---|---|
| 123 | 1-2 24V | Default=24V |
| | 2-3 12V | |

| JP4 - CMOS clear jumper | | |
|---|---|---|
| 123 | 1-2 Normal | Default=Normal |
| | 2-3 CMOS clear | |

| JP5 - COM4 DB9 pin 9 voltage select | | |
|---|---|---|
| 135<br> <br>246 | 1-2 0V<br>3-4 +5V<br>2-3 +12V | Default=0V |

| JP6 - COM1 DB9 pin 9 voltage select | | |
|---|---|---|
| 135<br> <br>246 | 1-2 0V<br>3-4 +5V<br>2-3 +12V | Default=0V |

| JP7 - COM3 DB9 pin 9 voltage select | | |
|---|---|---|
| 135<br> <br>246 | 1-2 0V<br>3-4 +5V<br>2-3 +12V | Default=0V |

| JP8 - COM5 DB9 pin 9 voltage select | | |
|---|---|---|
| 135<br> <br>246 | 1-2 0V<br>3-4 +5V<br>2-3 +12V | Default=0V |

***Note:***

*Do not plug in or unplug any connector except USB devices when the power is on.*

*The current loading for all COM ports should not exceed DC 5V/3A and DC 12V/2A。*

## 4.3 Motherboard BIOS settings

The POS terminal has a BIOS (Basic Input Output System) chip on the motherboard. Every time you start the terminals, the system will first run the BIOS self-test routine to check the main components of the system to ensure it is working properly.

The terminal is loaded with default BIOS settings in the factory. Please do not change the parameters in the BIOS unless necessary.

In the following situations, you need to run the BIOS setup:

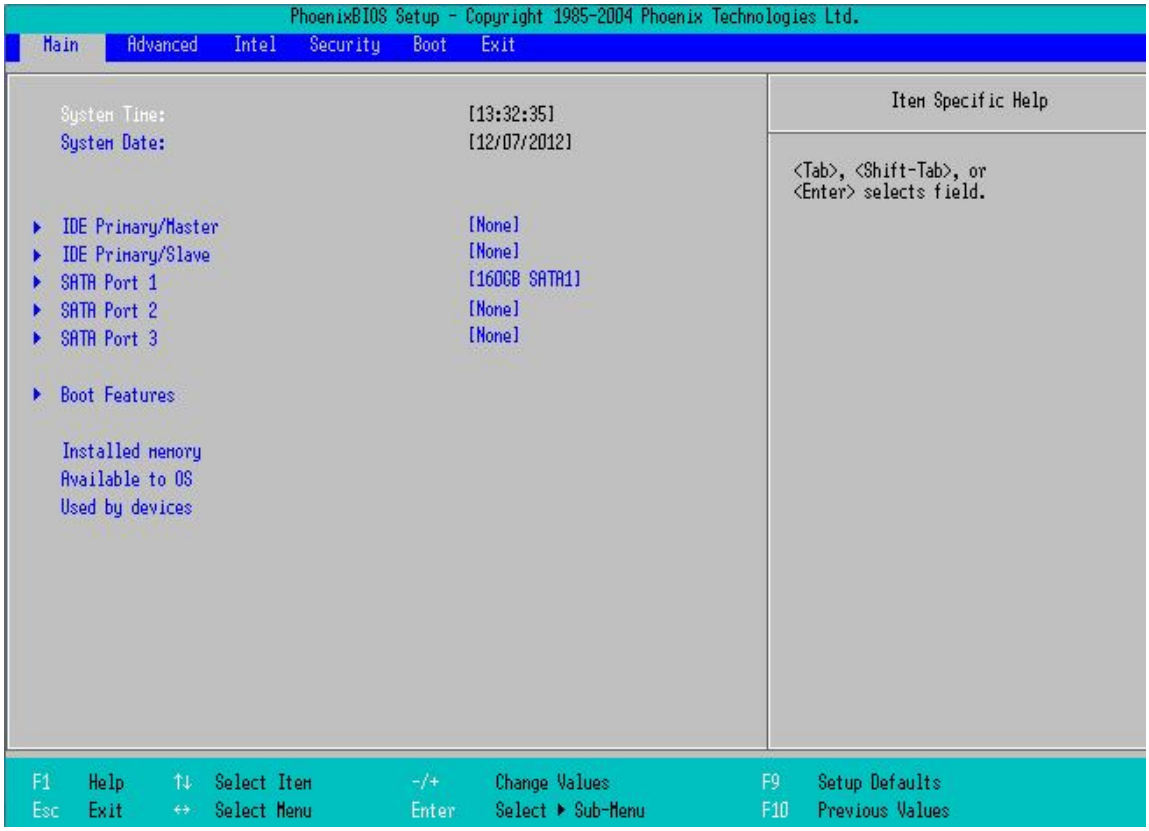
1) Error message appears on the screen during the system self-test and requested to enter BIOS setup.

2) If you need to change the factory default settings to customized application requirements (for example, boot device priorities).

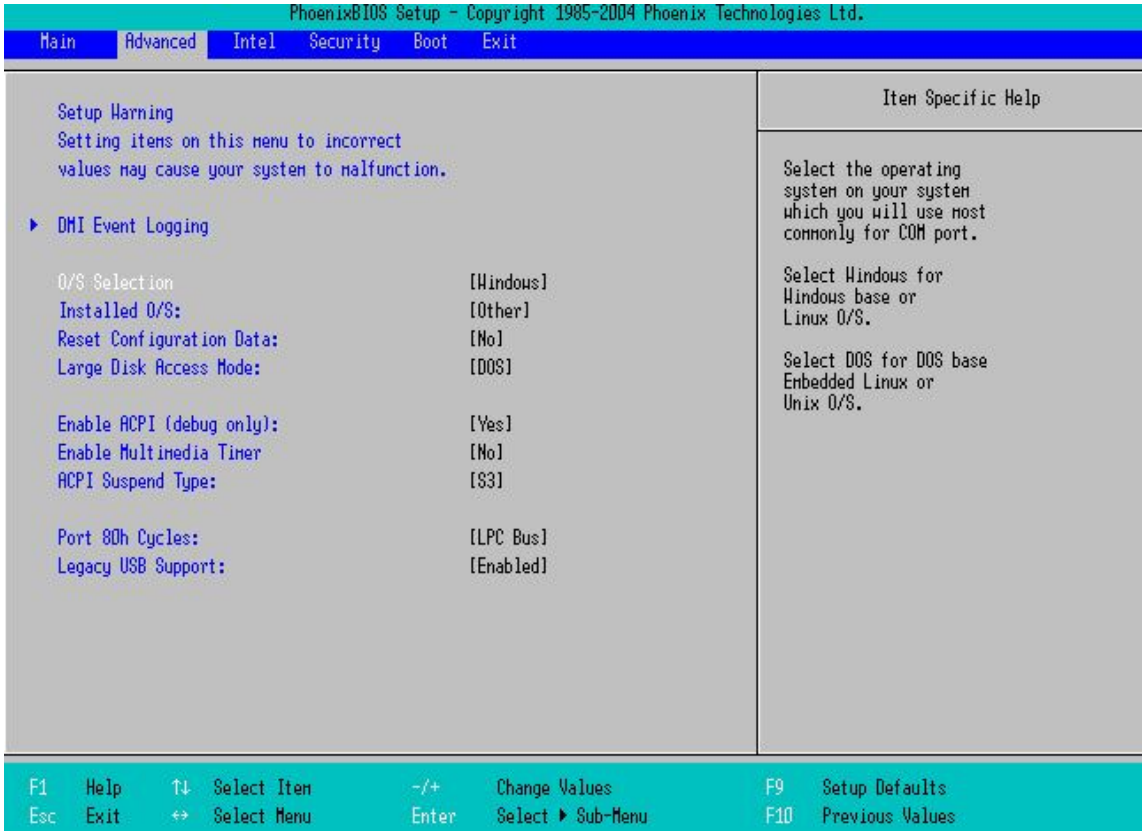
**Control keys**

| | |
|---|---|
| <↑> | Move up to previous item |
| <↓> | Move down to next item |
| <←> | Move left to previous menu |
| <→> | Move right to next menu |
| <Enter> | Select this option/sub-menu |
| <Esc> | Exit the menu or to return to the main menu from the submenu |
| <+> | Increase the option value or change selection |
| <-> | Reduce the option value or change selection |
| <F1> | Help |
| <F9> | Load default settings |
| <F10> | Restore previous values |

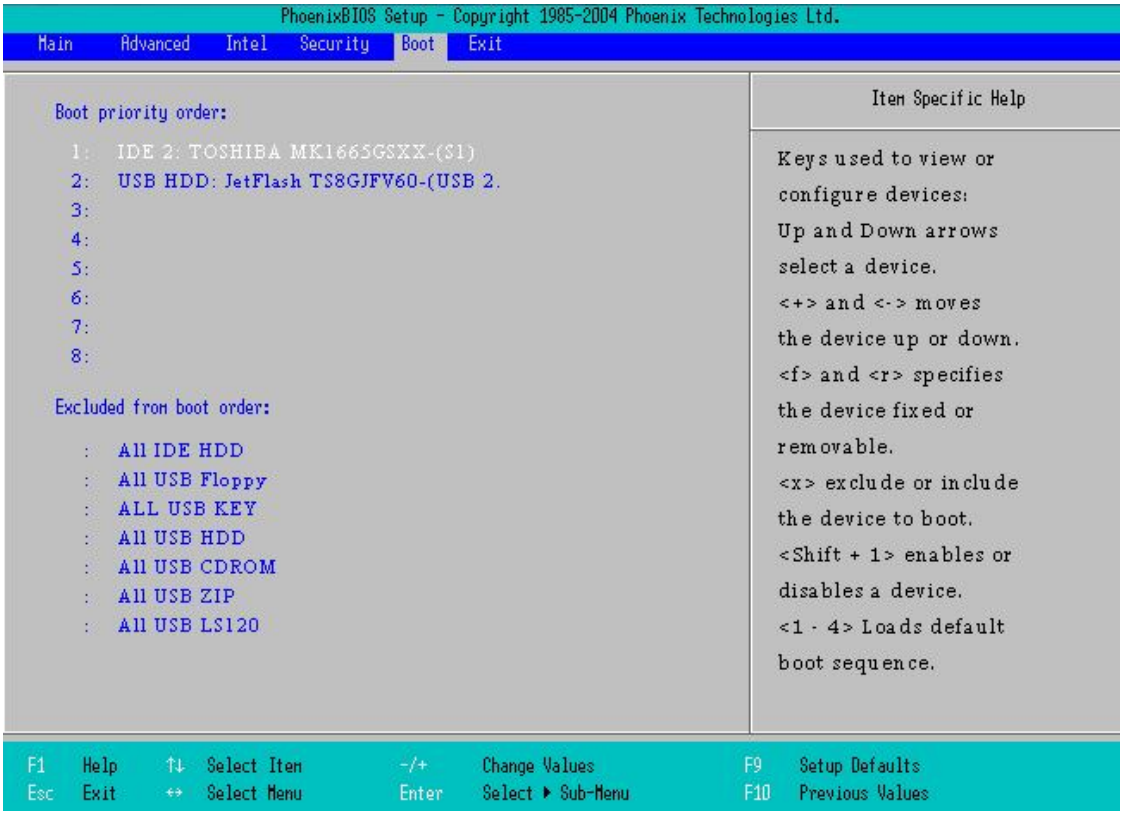
## Main Menu


PhoenixBIOS Setup - Copyright 1985-2004 Phoenix Technologies Ltd.
Main Advanced Intel Security Boot Exit
System Time: [13:32:35]
System Date: [12/07/2012]
IDE Primary/Master [None]
IDE Primary/Slave [None]
SATA Port 1 [160GB SATA1]
SATA Port 2 [None]
SATA Port 3 [None]
Boot Features
Installed memory
Available to OS
Used by devices
Item Specific Help
<Tab>, <Shift-Tab>, or
<Enter> selects field.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Previous Values

## Advanced Menu


PhoenixBIOS Setup - Copyright 1985-2004 Phoenix Technologies Ltd.
Main Advanced Intel Security Boot Exit
Setup Warning
Setting items on this menu to incorrect
values may cause your system to malfunction.
DMI Event Logging
O/S Selection [Windows]
Installed O/S: [Other]
Reset Configuration Data: [No]
Large Disk Access Mode: [DOS]
Enable ACPI (debug only): [Yes]
Enable Multimedia Timer [No]
ACPI Suspend Type: [S3]
Port 80h Cycles: [LPC Bus]
Legacy USB Support: [Enabled]
Item Specific Help
Select the operating
system on your system
which you will use most
commonly for COM port.
Select Windows for
Windows base or
Linux O/S.
Select DOS for DOS base
Embedded Linux or
Unix O/S.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Previous Values

## Boot Menu

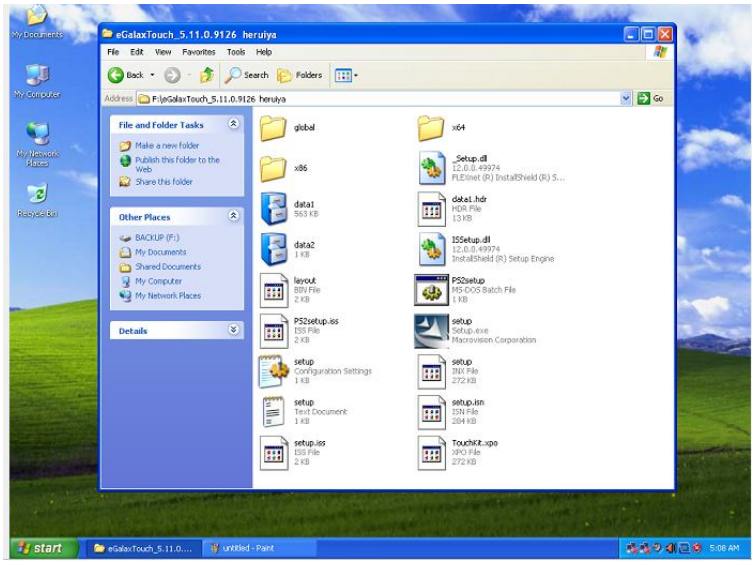

PhoenixBIOS Setup - Copyright 1985-2004 Phoenix Technologies Ltd.
Main Advanced Intel Security Boot Exit
Boot priority order:
1: IDE 2: TOSHIBA MK1665GSXX-(S1)
2: USB HDD: JetFlash TS8GJFV60-(USB 2.
3:
4:
5:
6:
7:
8:
Excluded from boot order:
: All IDE HDD
: All USB Floppy
: ALL USB KEY
: All USB HDD
: All USB CDROM
: All USB ZIP
: All USB LS120
Item Specific Help
Keys used to view or configure devices:
Up and Down arrows select a device.
<+> and <-> moves the device up or down.
<f> and <r> specifies the device fixed or removable.
<x> exclude or include the device to boot.
<Shift + 1> enables or disables a device.
<1 - 4> Loads default boot sequence.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Previous Values

## Exit Menu

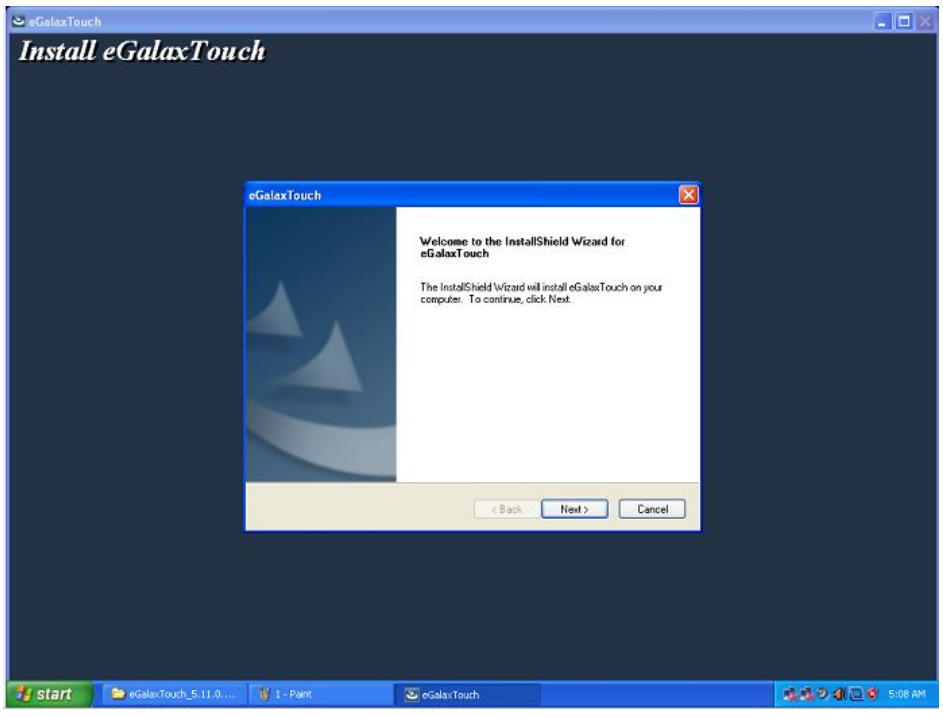
PhoenixBIOS Setup - Copyright 1985-2004 Phoenix Technologies Ltd.
Main Advanced Intel Security Boot Exit
Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Discard Changes
Save Changes
Item Specific Help
Load default values for all SETUP items.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Previous Values

### 4.4 Touch screen driver installation:

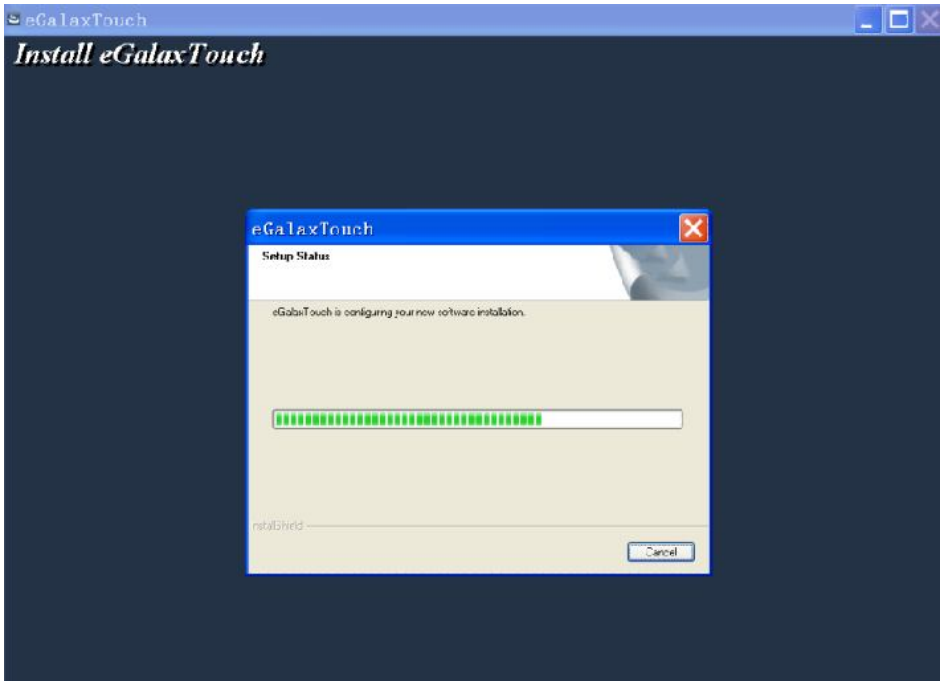
**Step 1:** Navigate to the installer directory to find the setup.exe file. Double-click on "setup.exe" to start installation.



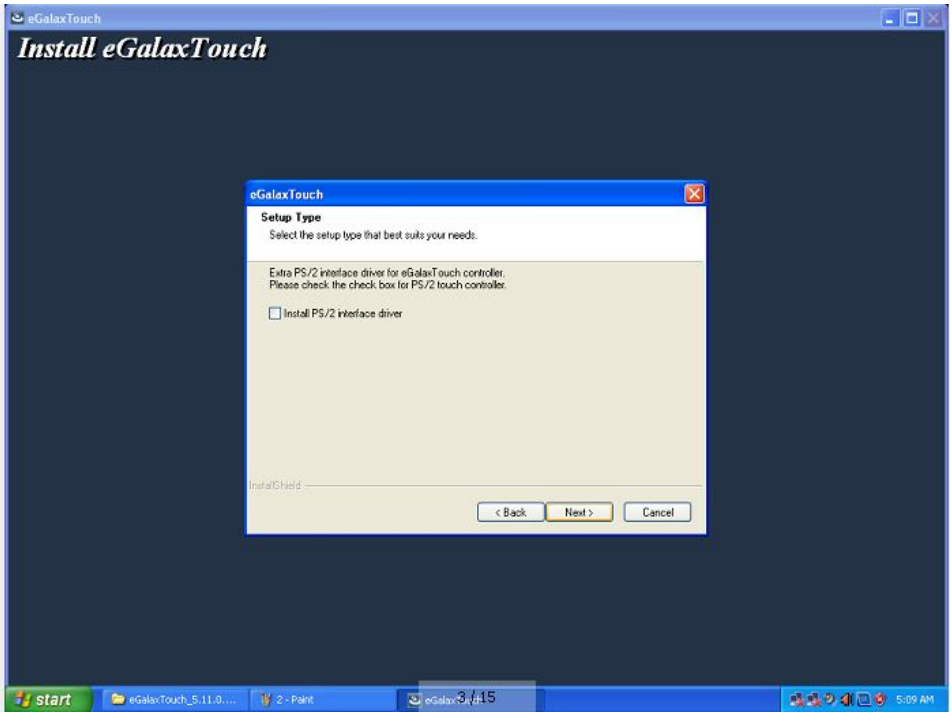

**Step 2:** When installation starts, click [Next] to proceed to the next step.



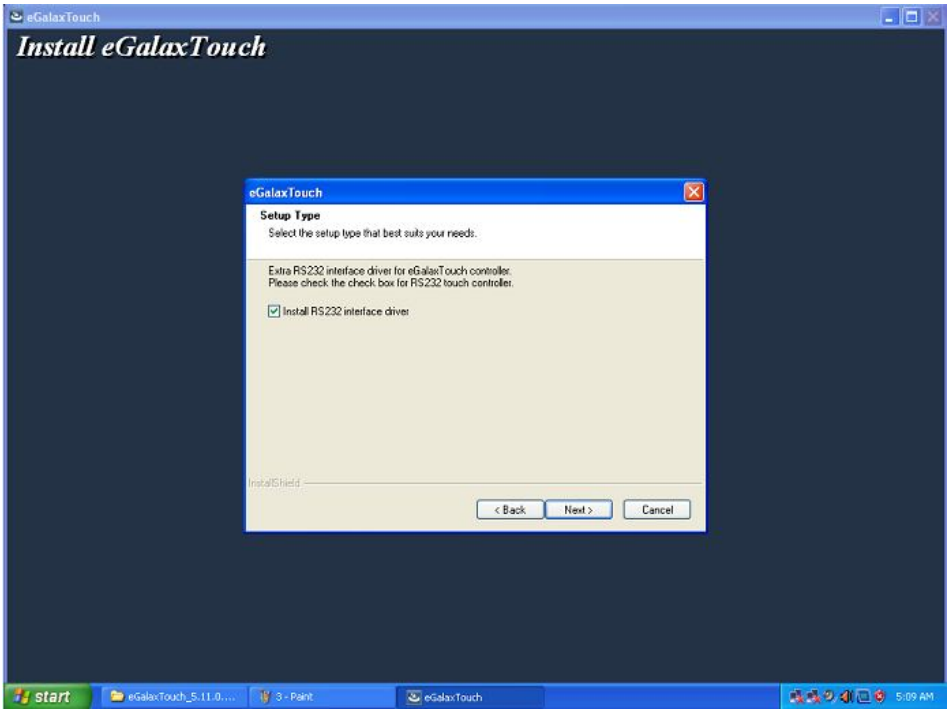
**Step 3:** Installation in progress



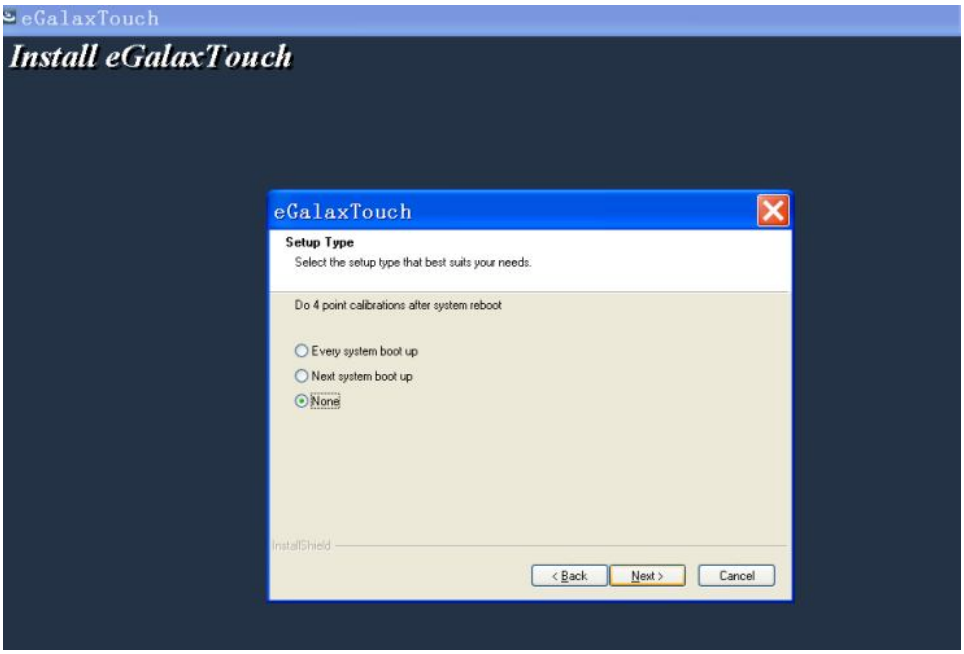

**Step 4:** Uncheck “Install PS/2 interface driver” and click [Next] to continue installation.



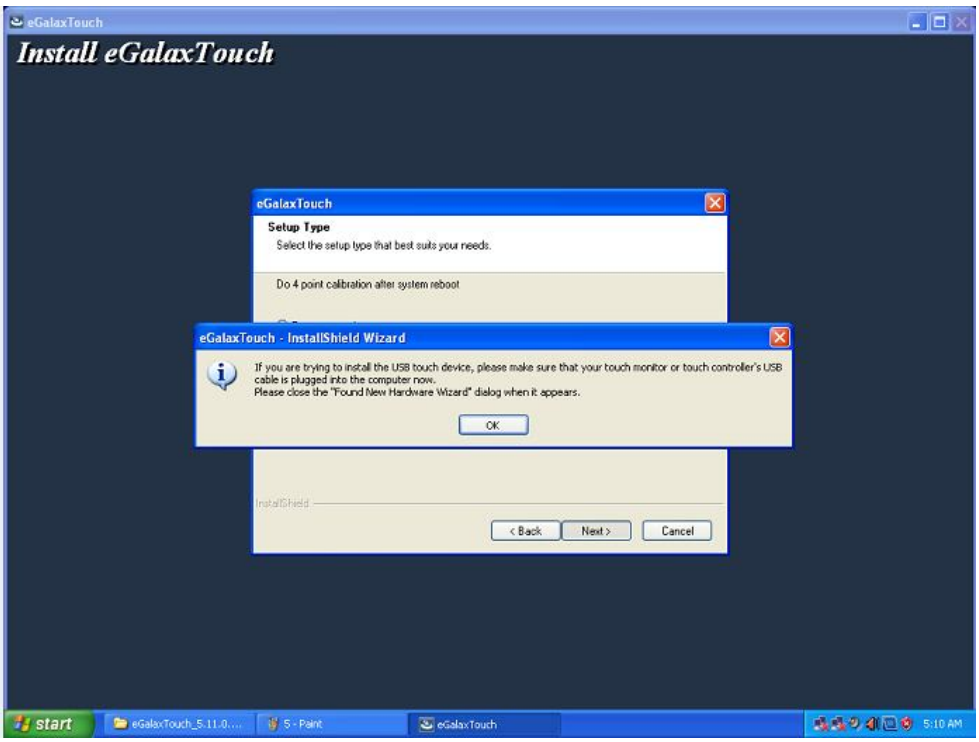
**Step 5:** Uncheck “install RS232 interface driver” and click [Next] to continue installation.



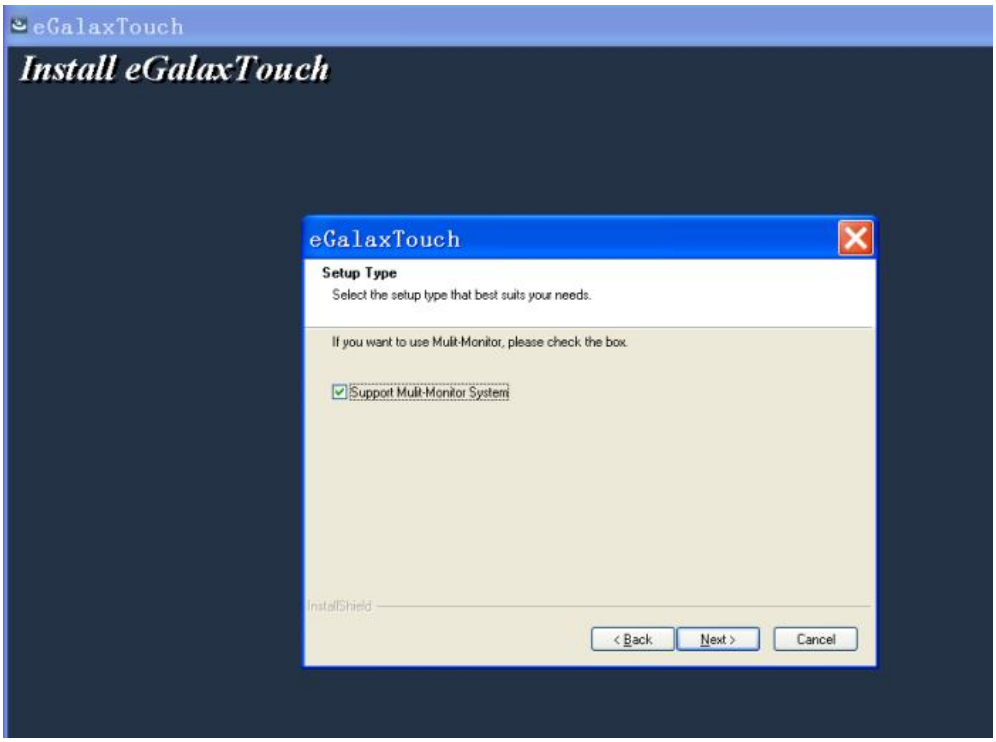

**Step 6:** Select option “NONE”, click [Next] to continue installation.



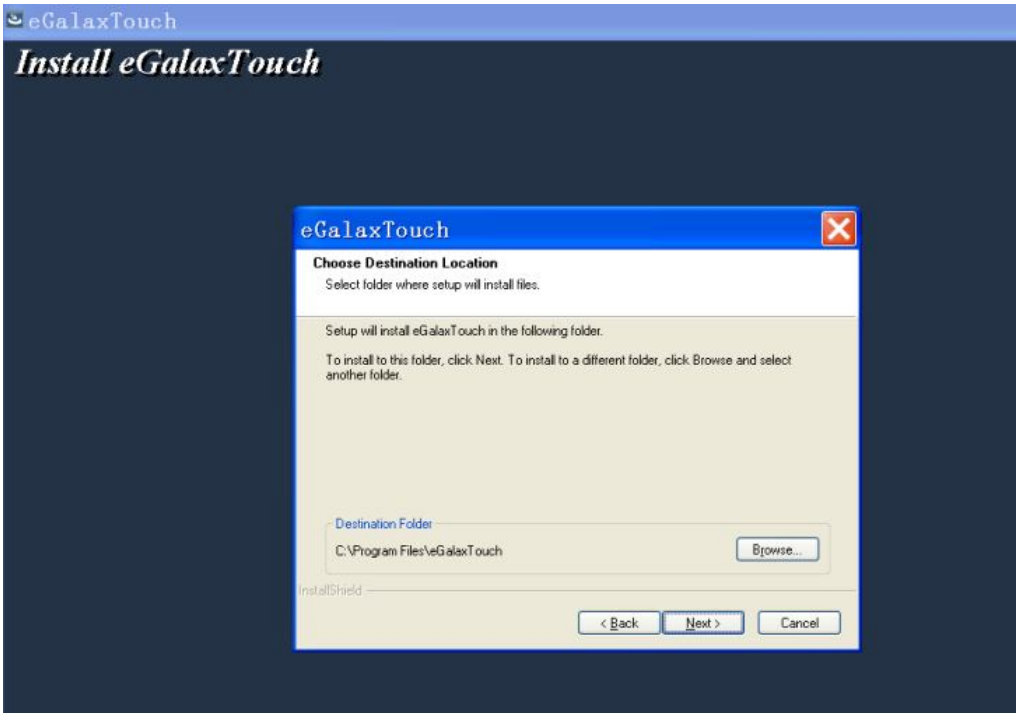
**Step 7:** When installing USB touch, please connect the USB controller and USB cable


eGalaxTouch
Install eGalaxTouch
eGalaxTouch
Setup Type
Select the setup type that best suits your needs.
Do 4 point calibration after system reboot
eGalaxTouch - InstallShield Wizard
If you are trying to install the USB touch device, please make sure that your touch monitor or touch controller's USB cable is plugged into the computer now.
Please close the "Found New Hardware Wizard" dialog when it appears.
OK
InstallShield
< Back
Next >
Cancel
start
eGalaxTouch_5.11.0....
5 - Paint
eGalaxTouch
5:10 AM

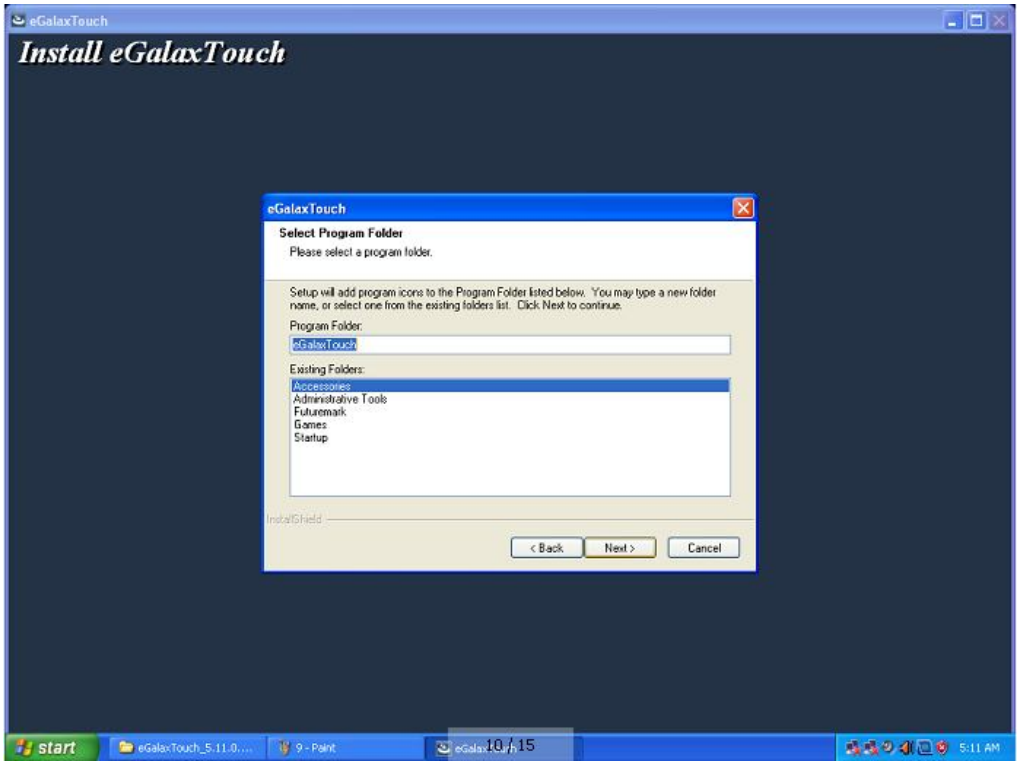
**Step 8:** If there are additional touch monitors connected, please check "Support multi- monitor system".



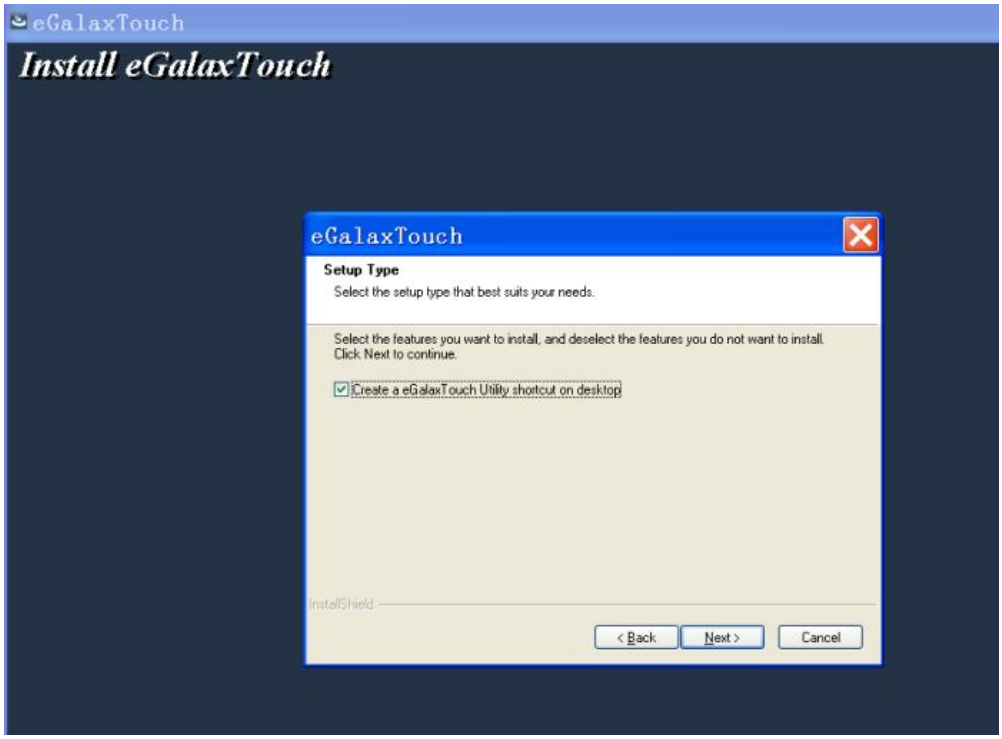
**Step 9:** Select the destination location to install the touch driver. The default path is "C: \ Program Files \ eGalaxtouch". Click [Next] to continue installation.


eGalaxTouch
Install eGalaxTouch
eGalaxTouch
Choose Destination Location
Select folder where setup will install files.
Setup will install eGalaxTouch in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\eGalaxTouch
Browse...
InstallShield
< Back
Next >
Cancel

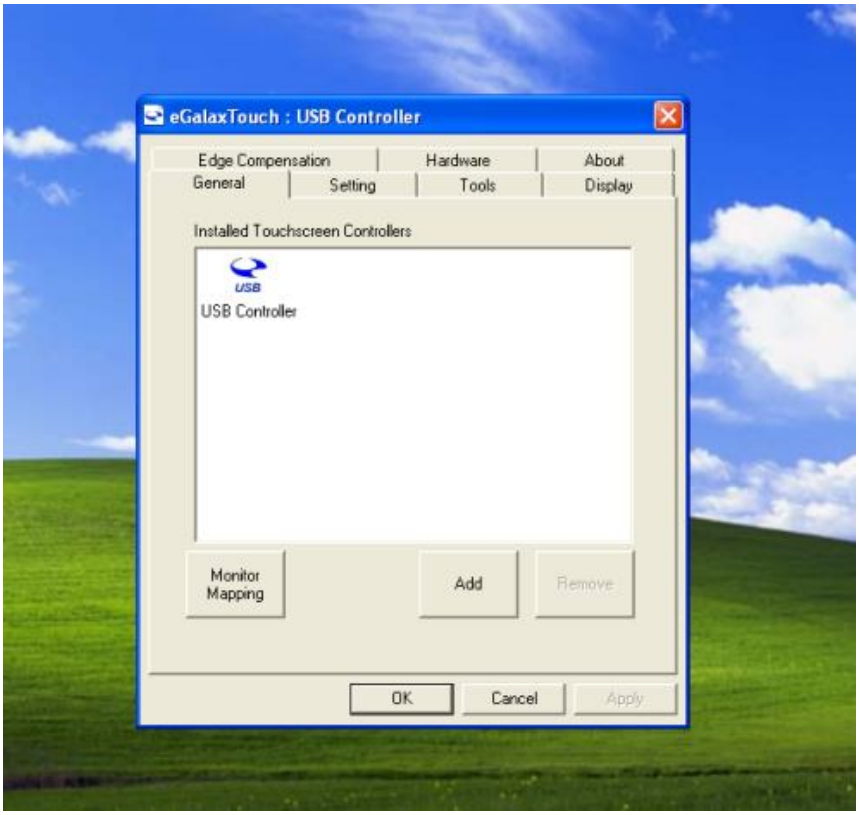
**Step 10:** Select the Program Folder to install the utility. The default is "eGalaxtouch". Click [Next] to continue installation.



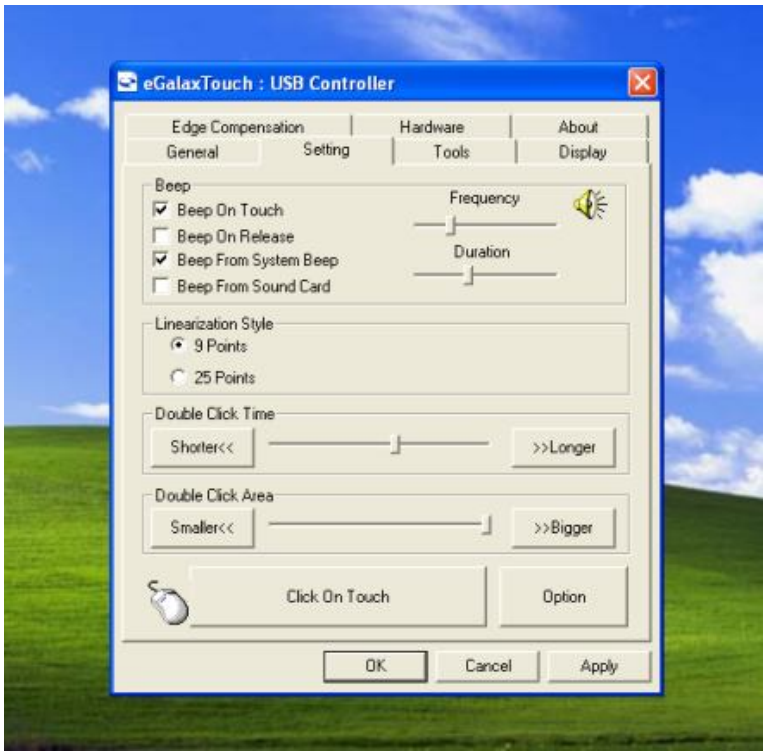
**Step 11:** Check the option to create a desktop shortcut icon.


eGalaxTouch
Install eGalaxTouch
eGalaxTouch
Setup Type
Select the setup type that best suits your needs.
Select the features you want to install, and deselect the features you do not want to install. Click Next to continue.
Create a eGalaxTouch Utility shortcut on desktop
InstallShield
< Back
Next >
Cancel

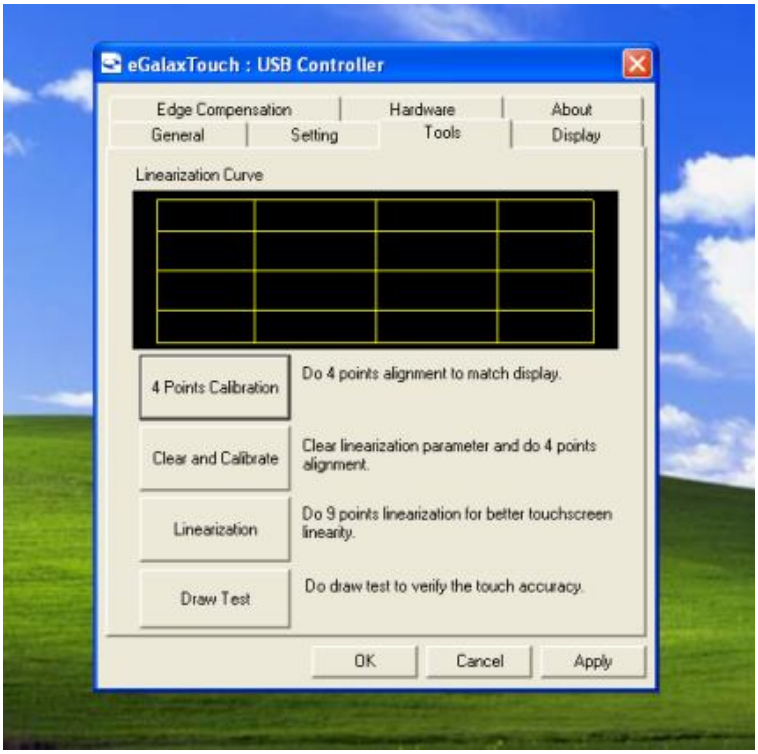
After install the driver successfully, identify the USB controller is installed as shown below.



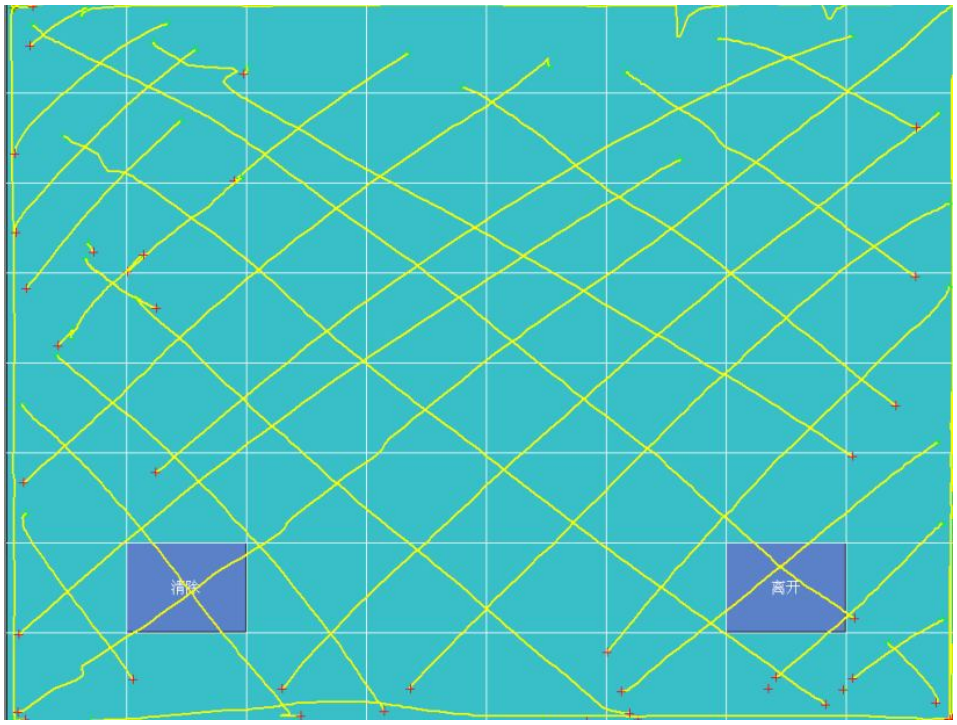
## Touch function settings




## Touch calibration



Touch device line test



# 5 Troubleshooting

### 1) Terminal does not boot

If the terminal cannot boot after repeated pressing of the power switch when connect to the power, the terminal power light remains off, the fan does not operate, and the BIOS beeping is not heard, it might be power supply problems.

(a) Check the power adapter is plugged in correctly to the power outlet.

(b) Check the connection between the terminal and the power adapter, and then re-boot the machine.

(c) If the terminal is working in high temperature environment that causes the terminal automatically shut down in protection mode, please disconnect the power of the machine. Wait until environment temperature has dropped and restart.

(d) If the terminal does not boot after a sudden power failure or illegal shutdown, unplug the adapter from the terminal, and press the power button several times. Then plug in the adapter and boot again.

(e) If the adapter light blinks or go off, unplug the adapter immediately and do not plugged in again. Contact with our products service center.

### 2) The terminal automatically restart (or shutdown)

If terminal is frequently automatic shutdown or auto-boot during operation (or boot up),

(a) Check the power supply is connected properly; make sure the plug is not loose and contacts are in good condition;

(b) Check if the AC line voltage is stable;

(c) A sudden power failure or improper shutdown may cause this problem. Press F8 to boot system into safe mode and debug.

(d) If any new hardware is added or replaced that caused this problem, remove the hardware and reboot;

(e) If the above steps do not resolve this problem, reinstall the operating system.

**3) The touch screen does not respond**

(a) Remove the touch driver and then install it again.

(b) Execute the “eGalaxTouch utility and check if the interface port is working.

**4) When touching the screen, cursor always returns to a fixed position.**

(a) Check if there is anything pressing on the touch screen.

(b) Other high power or high frequency equipment may affect the screen or controller. Make sure that the touch screen is away from the high-voltage equipment.

(c) The touch screen driver is not installed correctly, install the driver (please refer to the "Touch Screen Setup") and run a 25-point calibration.

**5) Touch screen is not accurate**

Please run the touch screen calibration program with a 25-point recalibration, we also recommend you to do this after change the monitor resolution or refresh rate. When running the calibration, touch the center of calibration point to assure accuracy.

**6) The cursor moves opposite to the touch movement**

(a) Run the 4/9/25 point calibration.

(b) The touch screen driver is not installed properly, reinstall the driver.

**7) The cursor fixed at the edge of LCD**

(a) Check if the edge of the screen is being pressed by something.

(b) Check the edges of the LCD if there is anything jammed in the front bezel.

(c) Make sure the touch screen is clean.

**8) The cursor in the touch screen can only move in a small area or touch positions are inaccurate.**

(a) This situation usually occurs first time after installing the driver. Please run the touch screen calibration program. We also recommend you to do this after changing monitor resolution.

(b) Run the touch screen calibration program to do a 25-point recalibration.

# 6 Specifications

| MODEL | SB9015F 15" All-in-one Touch POS Terminal |
|---|---|
| | |
| **Main Board** | |
| CPU | Intel Atom Processor, D525 dual core 1.8GHz |
| System Chipset | D525 + ICH8M chipset |
| Memory | 2 slots, DDR3 1066/1333, up to 4GB |
| Storage | SATA 2.5 inch Hard Disk Drive, 160GB or higher |
| **Display** | |
| LCD panel | 15" TFT LCD |
| Resolution | 1024x768 |
| Brightness | 250cd/$m^2$ |
| Touch Screen | 5-wire resistive touch (RS232 interface) |
| Tilting Angle | 0 to 90° |
| **I/O Ports** | |
| External DC Input | 1x DC jack (connected to power adapter) |
| PS/2 Port | 1x PS/2 keyboard |
| Serial Ports | 3x DB9 with DC5V/12V on pin 9 (jumper option), 1x RJ45 |
| Parallel Port | Optional 1x DB25 on cable |
| VGA | 1x DB15 2nd video VGA connector |
| LAN | 1x RJ45, 10/100M/1Gbit |
| USB | 6x USB 2.0 |
| Cash Drawer Port | 1x RJ11, 12V/24V jumper selectable |
| Audio | 1x audio out, 2x 1W built-in speaker |
| DC Output | 1x DC 12V output |
| **Environment** | |
| Operating Temperature | 0°C to 40°C |
| Storage Temperature | -25°C to 70°C |
| Relative Humidity | 8% to 80% non-condensing |
| **Electrical (External Power Adapter)** | |
| Input | 100V to 240VAC, 50 to 60Hz, 2.0A |
| Output | DC 24V 5A |
| Output Power | 120W max |
| **Mechanical** | |
| Dimensions | 329x348x213mm |
| Weight | 10Kg |
| | |

# SB9015F All-in-one Touch POS terminal

bematech.com
logiccontrols.com